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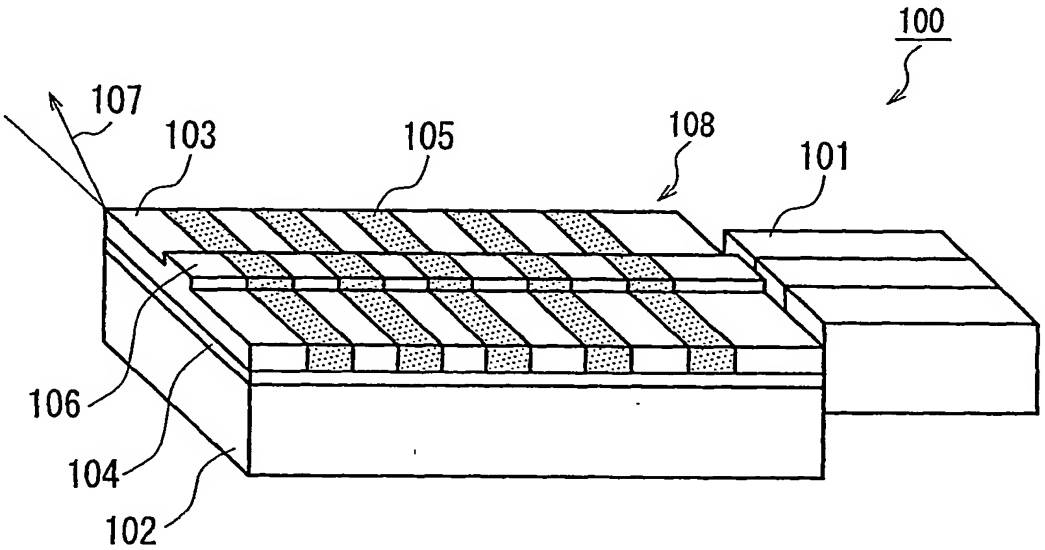
(81) 指定国 (国内): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[続葉有]

(54) Title: OPTICAL WAVEGUIDE DEVICE, COHERENT LIGHT SOURCE USING SAME AND OPTICAL APPARATUS HAVING SAME

(54) 発明の名称: 光導波路デバイスならびにそれを用いたコヒーレント光源およびそれを備えた光学装置



(57) Abstract: An optical waveguide device comprises a substrate composed of a non-linear optical material and a periodic polarization reversal structure having the same composition as the non-linear optical material. The periodic polarization reversal structure has a refractive index profile that is dependent on its structure.

(57) 要約: 非線形光学材料からなる基板と、この非線形光学材料と同一の組成からなる周期的な分極反転構造とを備え、分極反転構造は、その構造に依存した屈折率分布を有する。

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(84) 指定国 (広域): ARIPO 特許 (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), ユーラシア特許 (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), ヨーロッパ特許 (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI 特許 (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP03/16488

A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl[7] G02F1/37, G02B6/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho	1922-1996	Toroku Jitsuyo Shinan Koho	1994-2004
Kokai Jitsuyo Shinan Koho	1971-2004	Jitsuyo Shinan Toroku Koho	1996-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
IEL, online, ISI, Web of Science, JICST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 07-122809 A (Oki Electric Industry Co., Ltd.), 12 May, 1995 (12.05.95), (Family: none)	1-12
A	KITAOKA, Y. et al., Intracavity second-harmonic generation with a periodically domain-inverted $LiTaO_3$ device, OPTICS LETTERS, Vol.21, No.24, December, 1996, pages 1972 to 1974	1-12
A	Hu, Z.H. et al., Phase-mapping of periodically domain-inverted $LiNbO_3$ with coherent X-rays, Nature, Vol.392, April, 1998, pages 690 to 693	1-12
A	Restoin, C. et al., Ferroelectric domain inversion by electron beam on $LiNbO_3$ and Ti: $LiNbO_3$, Journal of Applied Physics, Vol.88, No.11, December, 2000, pages 6665 to 6668	1,3-12

[X] Further documents are listed in the continuation of Box C. [ ] See patent family annex.

* Special categories of cited documents:
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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search 16 March, 2004 (16.03.04)	Date of mailing of the international search report 30 March, 2004 (30.03.04)
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP03/16488

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KAWAGUCHI, T. et al., New ridge-type $LiNbO_3$ optical waveguide for high-power QPM-SHG laser, Technical Report of IEICE, LQE2002-8, 05. 2002, pages 29 to 32	3-7